Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL QUALITY MEASURES CLEARINGHOUSE

General

Title

Stroke: percent of ischemic stroke patients who are prescribed a statin medication at hospital discharge.

Source(s)

Specifications manual for national hospital inpatient quality measures, version 5.0b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; Effective 2015 Oct 1. various p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percent of ischemic stroke patients 18 years of age and older with who were on a lipid-lowering medication prior to hospital arrival, who are prescribed a statin medication at hospital discharge.

Rationale

There is an extensive and consistent body of evidence supporting the use of statins for secondary prevention in patients with clinically evident atherosclerotic cardiovascular disease (ASCVD), which includes individuals with ischemic stroke due to large artery atherosclerosis, individuals with ischemic stroke due to intrinsic small vessel disease, and individuals with ischemic stroke not directly due to atherosclerosis but with clinically evident atherosclerotic disease in an uninvolved cerebral or noncerebral bed. Both women and men with clinical ASCVD are at increased risk for recurrent ASCVD and ASCVD death. High-intensity statin therapy should be initiated or continued as first-line therapy in women and men less than or equal to 75 years of age who have clinical ASCVD, unless contraindicated. In patients

with clinical ASCVD and a contraindication to high-intensity statin therapy, moderate-intensity therapy should be considered as an alternative if it can be tolerated. In individuals greater than 75 years of age, the potential for ASCVD risk reduction benefits, adverse effects, drug-drug interactions, and patient preferences should be considered, and statin therapy individualized based on these considerations (Stone et al., 2014).

Evidence for Rationale

Specifications manual for national hospital inpatient quality measures, version 5.0b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; Effective 2015 Oct 1. various p.

Stone NJ, Robinson JG, Lichtenstein AH, Bairey Merz CN, Blum CB, Eckel RH, Goldberg AC, Gordon D, Levy D, Lloyd-Jones DM, McBride P, Schwartz JS, Shero ST, Smith SC Jr, Watson K, Wilson PW. 2013 ACC/AHA guideline on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular risk in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2014 Jul 1;63(25 Pt B):2889-934. [144 references] PubMed

Primary Health Components

Stroke; low-density lipoprotein (LDL); statin

Denominator Description

Ischemic stroke patients (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Ischemic stroke patients prescribed statin medication at hospital discharge

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

A systematic review of the clinical research literature (e.g., Cochrane Review)

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

- Stroke ranks as the number five cause of death in the United States, following diseases of the heart, cancer, and chronic lung-related diseases. Each year, approximately 795,000 people experience a new or recurrent stroke. Approximately 610,000 of these are first attacks, and 185,000 are recurrent strokes. These numbers equate to one stroke victim every 40 seconds on average. According to 2010 mortality data, one of every 20 deaths in the United States is attributable to stroke. Women have a higher lifetime risk of stroke than men. Lifetime risk of stroke among those 55 to75 years of age was

1 in 5 for women (20% to 21%) and approximately 1 in 6 for men (14% to 17%). Blacks have a risk of first-ever stroke that is almost twice that of whites (American Heart Association [AHA], 2015).

- Stroke is also a leading cause of long-term disability (Centers for Disease Control and Prevention [CDC], 2009). Data from the National Heart, Lung and Blood Institute (NHLBI) revealed that 50% of ischemic stroke survivors age greater than 65 years had some hemiparesis; 35% experienced depressive symptoms; 30% were unable to ambulate without assistance; 26% were dependent in activities of daily living; 19% had aphasia; and 26% were institutionalized in a nursing home. The mean lifetime cost of ischemic stroke, including inpatient care, rehabilitation, and follow-up as necessary for residual deficits are estimated at $140,048 per person (AHA, 2015).
- According to the Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III/ATP III) (NCEP, 2002), statins should be considered as first-line drugs when low-density lipoprotein (LDL)-lowering drugs are indicated to achieve LDL treatment goals. Hydroxy-methylglutaryl coenzyme A (HMG CoA) reductase inhibitors (statins) are powerful LDL-lowering drugs. Statin therapy reduces the risk of acute coronary syndromes, coronary procedures, and other coronary outcomes in both primary and secondary prevention. It also reduces the risk of stroke in secondary prevention.
- The Stroke Prevention by Aggressive Reduction of Cholesterol Levels (SPARCL) trial (Amarenco et al., 2006) concluded that in patients with recent stroke or transient ischemic attack (TIA) and without known coronary heart disease, 80 mg of atorvastatin per day reduced the overall incidence of strokes and cardiovascular events, despite a small incidence of hemorrhagic stroke. The trial randomly assigned 4731 patients who had had a stroke or TIA within one to six months before study entry, had LDL cholesterol levels of 100 to 190 mg per deciliter (2.6 to 4.9 mmol per liter), and had no known coronary heart disease to double-blind treatment with 80 mg of atorvastatin per day or placebo. The primary end point was a first nonfatal or fatal stroke. The mean LDL cholesterol level during the trial was 73 mg per deciliter (1.9 mmol per liter) among patients receiving atorvastatin and 129 mg per deciliter (3.3 mmol per liter) among patients receiving placebo. During a median follow-up of 4.9 years, 265 patients (11.2 percent) receiving atorvastatin and 311 patients (13.1 percent) receiving placebo had a fatal or nonfatal stroke (5-year absolute reduction in risk, 2.2 percent; adjusted hazard ratio, 0.84; 95 percent confidence interval, 0.71 to 0.99; P=0.03; unadjusted P=0.05). The atorvastatin group had 218 ischemic strokes and 55 hemorrhagic strokes. The five-year absolute reduction in the risk of major cardiovascular events was 3.5 percent (hazard ratio, 0.80; 95 percent confidence interval, 0.69 to 0.92; P=0.002). The overall mortality rate was similar, with 216 deaths in the atorvastatin group and 211 deaths in the placebo group (P=0.98), as were the rates of serious adverse events. Elevated liver enzyme values were more common in patients taking atorvastatin.

Evidence for Additional Information Supporting Need for the Measure

Amarenco P, Bogousslavsky J, Callahan A 3rd, Goldstein LB, Hennerici M, Rudolph AE, Sillesen H, Simunovic L, Szarek M, Welch KM, Zivin JA, Stroke Prevention by Aggressive Reduction in Cholesterol Levels (SPARCL). High-dose atorvastatin after stroke or transient ischemic attack. N Engl J Med. 2006 Aug 10;355(6):549-59. PubMed

American Heart Association (AHA). Heart disease and stroke statistics - 2015 update. Dallas (TX): American Heart Association (AHA); 2015. 22 p.

Centers for Disease Control and Prevention (CDC). Prevalence and most common causes of disability among adults--United States, 2005. MMWR Morb Mortal Wkly Rep. 2009 May 1;58(16):421-6. PubMed

National Cholesterol Education Program. Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) final report. Circulation. 2002 Dec 17;106(25):3143-421. PubMed

Extent of Measure Testing

Unspecified

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Hospital Inpatient

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Specified

Target Population Age

Age greater than or equal to 18 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Making Care Safer
Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Safety

Data Collection for the Measure

Case Finding Period

Discharges October 1 through June 30

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Institutionalization

Patient/Individual (Consumer) Characteristic

Therapeutic Intervention

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions
Discharges with an *International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-*

CM) Principal Diagnosis Code for ischemic stroke (as defined in the appendices of the original measure documentation)

Exclusions

- Patients less than 18 years of age
- Patients who have a Length of Stay (LOS) greater than 120 days
- Patients with *Comfort Measures Only* (as defined in the Data Dictionary) documented
- Patients enrolled in clinical trials
- Patients admitted for *Elective Carotid Intervention* (as defined in the Data Dictionary)
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients with a *Reason For Not Prescribing Statin Medication at Discharge* (as defined in the Data Dictionary)

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions
Ischemic stroke patients prescribed statin medication at hospital discharge

Exclusions
None

Numerator Search Strategy

Institutionalization

Data Source

Administrative clinical data

Electronic health/medical record

Paper medical record

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

- STK Initial Patient Population Algorithm Flowchart
- STK-6: Discharged on Statin Medication Flowchart

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

STK-6: discharged on statin medication.

Measure Collection Name

National Hospital Inpatient Quality Measures

Measure Set Name

Stroke

Submitter

The Joint Commission - Health Care Accreditation Organization

Developer

The Joint Commission - Health Care Accreditation Organization

Funding Source(s)

All external funding for measure development has been received and used in full compliance with The Joint Commission's Corporate Sponsorship policies, which are available upon written request to The Joint Commission.

Composition of the Group that Developed the Measure

The composition of the group that developed the measure is available at: http://www.jointcommission.org/assets/1/6/Roster_STK_Maintenance_TAP_web_posting_Jul2012.pdf .

Financial Disclosures/Other Potential Conflicts of Interest

Expert panel members have made full disclosure of relevant financial and conflict of interest information in accordance with the Joint Commission's Conflict of Interest policies, copies of which are available upon written request to The Joint Commission.

Endorser

National Quality Forum - None

NQF Number

not defined yet

Date of Endorsement

2014 Dec 23

Measure Initiative(s)

Hospital Inpatient Quality Reporting Program

Quality CheckÂ®

Adaptation

This measure was adapted from another source.

Date of Most Current Version in NQMC

2015 Oct

Measure Maintenance

This measure is reviewed and updated every 6 months.

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

This measure updates a previous version: Specifications manual for national hospital inpatient quality measures, version 4.3b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; 2014 Apr. various p.

Measure Availability

Source available from The Joint Commission Web site . Information is also available from the QualityNet Web site . Check The Joint Commission Web site and QualityNet Web site regularly for the most recent version of the specifications manual and for the applicable dates of discharge.

NQMC Status

The Joint Commission originally submitted this NQMC measure summary to ECRI Institute on April 30, 2009. This NQMC summary was reviewed accordingly by ECRI Institute on September 9, 2009. The information was verified by the measure developer on November 9, 2009.

The Joint Commission informed NQMC that this measure was updated on April 28, 2010 and provided an updated version of the NQMC summary. This NQMC summary was updated accordingly by ECRI Institute on September 3, 2010.

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The Joint Commission informed NQMC that this measure was updated on March 23, 2015 and provided an updated version of the NQMC summary. This NQMC summary was updated accordingly by ECRI Institute on April 10, 2015.

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This NQMC summary was edited by ECRI Institute on November 16, 2015.

Copyright Statement

Production

Source(s)

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